METHOD AND APPARATUS FOR HIGH-PERFORMANCE
RENDERING AND HIT-TESTING OF A WINDOW TREE

Abstract of the Disclosure

A method and apparatus for high-performance rendering and hit-testing of a
5   window tree is provided.   A window tree may be rendered using an application
programming interface provided by the present invention. The application programming
interface provides support for world-transforms, enabling entire sub-trees of the window
tree to be rotated and scaled during rendering. In order to quickly render and hit-test the
transformed nodes of the window tree, a stack-based implementation of the "painter's
10   algorithm" is utilized to achieve fast rendering. By storing all state information on a
stack regarding each node in the window tree and building new data structures
containing rendering information for each node and its children, any portion of the sub
tree may be rendered on demand.